



SEQUENCE LISTING

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<120> NOVEL ENZYME

<130> 1498-119

<140> 09/763,824

<141> 2002-04-29

<150> PCT/GB99/03538

<151> 1999-10-26

<150> GB 9823468.5

<151> 1998-10-28

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 <210> 34
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36

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Leu Glu Asp Gly Thr Ala Gly Glu Gln Leu His Lys Ala Met Lys Arg
20 25 30
Tyr Ala Leu Val Pro Gly Thr Ile Ala Phe Thr Asp Ala His Ile Glu
35 40 45
Val Asn Ile Thr Tyr Ala Glu Tyr Phe Glu Met Ser Val Arg Leu Ala
50 55 60
Glu Ala Met Lys Arg Tyr Gly Leu Asn Thr Asn His Arg Ile Val Val
65 70 75 80
Cys Ser Glu Asn Ser Leu Gln Phe Phe Met Pro Val Leu Gly Ala Leu
85 90 95
Phe Ile Gly Val Ala Val Ala Pro Ala Asn Asp Ile Tyr Asn Glu Arg
100 105 110
Glu Leu Leu Asn Ser Met Asn Ile Ser Gln Pro Thr Val Val Phe Val
115 120 125
Ser Lys Lys Gly Leu Gln Lys Ile Leu Asn Val Gln Lys Lys Leu Pro
130 135 140
Ile Ile Gln Lys Ile Ile Ile Met Asp Ser Lys Thr Asp Tyr Gln Gly
145 150 155 160
Phe Gln Ser Met Tyr Thr Phe Val Thr Ser His Leu Pro Pro Gly Phe
165 170 175
Asn Glu Tyr Asp Phe Val Pro Glu Ser Phe Asp Arg Asp Lys Thr Ile

| 180 | | | | | 185 | | | | | 190 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Ile | Met | Asn | Ser | Ser | Gly | Ser | Thr | Gly | Leu | Pro | Lys | Gly | Val |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Ala | Leu | Pro | His | Arg | Thr | Ala | Cys | Val | Arg | Phe | Ser | His | Ala | Arg | Asp |
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| Pro | Ile | Phe | Gly | Asn | Gln | Ile | Ile | Pro | Asp | Thr | Ala | Ile | Leu | Ser | Val |
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| Val | Pro | Phe | His | His | Gly | Phe | Gly | Met | Phe | Thr | Thr | Leu | Gly | Tyr | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ile | Cys | Gly | Phe | Arg | Val | Val | Leu | Met | Tyr | Arg | Phe | Glu | Glu | Glu | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Phe | Leu | Arg | Ser | Leu | Gln | Asp | Tyr | Lys | Ile | Gln | Ser | Ala | Leu | Leu | Val |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Pro | Thr | Leu | Phe | Ser | Phe | Phe | Ala | Lys | Ser | Thr | Leu | Ile | Asp | Lys | Tyr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Asp | Leu | Ser | Asn | Leu | His | Glu | Ile | Ala | Ser | Gly | Gly | Ala | Pro | Leu | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Lys | Glu | Val | Gly | Glu | Ala | Val | Ala | Lys | Arg | Phe | His | Leu | Pro | Gly | Ile |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Arg | Gln | Gly | Tyr | Gly | Leu | Thr | Glu | Thr | Thr | Ser | Ala | Ile | Leu | Ile | Thr |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Pro | Glu | Gly | Asp | Asp | Lys | Pro | Gly | Ala | Val | Gly | Lys | Val | Val | Pro | Phe |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Phe | Glu | Ala | Lys | Val | Val | Asp | Leu | Asp | Thr | Gly | Lys | Thr | Leu | Gly | Val |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Asn | Gln | Arg | Gly | Glu | Leu | Cys | Val | Arg | Gly | Pro | Met | Ile | Met | Ser | Gly |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Tyr | Val | Asn | Asn | Pro | Glu | Ala | Thr | Asn | Ala | Leu | Ile | Asp | Lys | Asp | Gly |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Trp | Leu | His | Ser | Gly | Asp | Ile | Ala | Tyr | Trp | Asp | Glu | Asp | Glu | His | Phe |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Phe | Ile | Val | Asp | Arg | Leu | Lys | Ser | Leu | Ile | Lys | Tyr | Lys | Gly | Tyr | Gln |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Val | Ala | Pro | Ala | Glu | Leu | Glu | Ser | Ile | Leu | Leu | Gln | His | Pro | Asn | Ile |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Phe | Asp | Ala | Gly | Val | Ala | Gly | Leu | Pro | Asp | Asp | Asp | Ala | Gly | Glu | Leu |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Pro | Ala | Ala | Val | Val | Val | Leu | Glu | His | Gly | Lys | Thr | Met | Thr | Glu | Lys |

[illegible]